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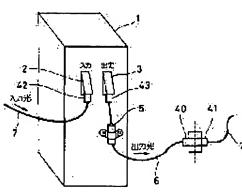
(54) PROTECTING UNIT FOR OPTICAL OUTPUT DEVICE, OPTICAL TRANSMISSION SYSTEM USING THE UNIT AND PROTECTING METHOD FOR OPTICAL OUTPUT DEVICE

## (57)Abstract:

PROBLEM TO BE SOLVED: To protect an optical output device from destruction due to fiber fuse phenomenon.

SOLUTION: To the output terminal 3 of a high output light amplifier 1 that outputs a high-level light beam to an optical fiber 7, there is attached in an externally replaceable form collimator-pair-containing patch cord 6 with the collimator pair 5 in-between. In the case where burning takes place in the end face of the optical fiber 7 of an optical connector 41 and where the heat is conducted to the

collimator pair containing patch cord 6 connected to an optical connector 40, the heat energy is diffused at the collimator pair 5; therefore, fusion due to the fiber fuse phenomenon is unpropagated to the high-output light amplifier 1 to stop the fusion before the amplifier 1. As a result, the



high-output light amplifier 1 can be protected from the fiber fuse phenomenon, enabling the repair/maintenance of the optical transmission system easily at a low cost by merely exchanging the optical fiber 7 and the collimator pair-contained patch cord 6.

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